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ON PAGE 13 IN THE PARAGRAPH BEGINNING IN LINE 24:

Other purposes and/or objectives yet of the disclosed invention will become ~~appearant~~ apparent from a reading of the Specification and Claims.

BSH 1-24-07 ON PAGE 16 IN THE PARAGRAPH BEGINNING IN LINE ~~2~~ 3:

Turning now to Figs. 5 - 8, there are shown N, C and S spectra for the case of no film, (solid lines), and for the case where 10 Angstroms of Amorphous Silicon (a-Si), (dashed lines), are deposited on, respectively, a Tantalum Metal Substrate (Fig. 5); on a Silicon Substrate with 20 Angstroms of Native Oxide (Fig. 6); on a Silicon Substrate with 250 Angstroms of Thermal Oxide (Fig. 7); and on a Silicon Substrate with 5000 Angstroms of Oxide present (Fig. 8). Note that while the dashed line are shifted from the solid lines in Figs 5 - 7, only Fig. 8 shows significant ~~osciliations~~ oscillations caused by deposition of 10 Angstroms of a-Si. That is, surprizingly, use of a Witness Sample which comprises thick Oxide at its Surface, greatly enhances the ability of ellipsometry to detect the presence of a 10 Angstrom film deposited thereonto.

ON PAGE 16 IN THE PARAGRAPH BEGINNING IN LINE 18:

It is acknowledged that Fig. 8 is difficult to interpret, and a prefered ~~appraoch~~ approach to displaying the data it contains is to calculate an RMS value which is calculated as:

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method teaches that superior results can often be achieved by working with ~~paramets~~ parameters derived from PSI (Ψ) and DELTA (Δ), which are known in the literature as N, C and S, said parameters being:

BSH. 1-24-09 ON PAGE 13 IN THE PARAGRAPH BEGINNING IN LINE ~~21~~ 19:

It is another purpose and/or objective yet of the disclosed invention to teach determination of optical constants of ultrathin absorbing films on ~~vittness~~ witness samples which have a relatively thick layer of optically transparent material.

ON PAGE 15 IN THE PARAGRAPH BEGINNING IN LINE 20:

To demonstrate the benefit of using N, C and S parameters in the method of the disclosed invention, an example involving obtaining data from a ~~vittness~~ witness sample which is monitored during deposition of a thin film will be described. This scenario might be encountered, for instance, during Gate metal deposition in a MOSFET fabrication step. Before presenting said example, it is noted that a problem with monitoring deposition of ultra-thin films onto MOSFET Gate Insulators using ellipsometry, is that ellipsometry is not always sensitive to the thickness of ultra-thin films on transparent dielectric material which is less than about 100 Angstroms deep. Where a witness sample is monitored, however, it can comprise a transparent dielectric material layer which is much thicker, (eg. 5000 Angstroms). The methodology of the disclosed invention enables very sensitive monitoring of ultra-thin layers of material deposited onto thick underlying transparent dielectric material.

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IN THE SPECIFICATION

Please enter the following Amendments:

BSH 1-24-07 ON PAGE 1 IN THE PARAGRAPH BEGINNING IN LINE ~~16~~ 17 AND CARRYING OVER TO PAGE 2:

As a very relevant non-limiting example to which the present invention can be beneficially applied, it is disclosed that fabrication of MOSFET Transistors requires formation of a Gate Structure on a Semiconductor Substrate. Typical practice is to use Silicon as the Semiconductor Substrate, grow thermal SiO_2 on its surface, (which is a dielectric material), and then apply metal atop thereof to form said Gate Structure. When Gate SiO_2 thickness is below about 100 Angstroms, however, it becomes leaky and is subject to breakdown at too low of voltages applied to the metal. Investigation of deposited materials, other than SiO_2 onto the Semiconductor for use as the dielectric material in Gate Structures, is therefore being pursued. However, control of the properties of the dielectic material formed during a fabrication proceedure ~~are~~ is sensitive to changes in the procedure, which changes are often difficult to detect and control. The present invention recognizes this fact and the fact that the first step in developing repeatability in fabrication is developing the ability to accurately monitor Gate dielectric materials. Methodology which enables accurate monitoring of materials allows identification of deviations from optimum which can be correlated to what are often subtle changes in fabrication procedure parameters, which subtle fabrication procedure changes are not readily obvious unless it is known to specifically look for their